CLAIMS

1. A method of selecting an optically viable path through which to route a connection from a first node to a second node of a photonic network, the method comprising:

selecting a plurality of optically viable photonic paths in the photonic network, at least one of the optically viable photonic paths comprising a plurality of consecutive optical links;

using a routing algorithm to select a path from the first node to the second node, the routing algorithm using the plurality of optically viable photonic paths as at least part of the topological context when selecting the path.

2. A method according to claim 1, wherein the step of selecting a plurality of optically viable photonic paths comprises

passing data identifying a first possible path in the photonic network to an optical viability checking function;

in response, receiving data indicating a measure of optical viability of the first possible path from the optical viability checking function; and

determining whether to include the first possible path in the plurality of optically viable photonic paths in dependence on the received data.

3. A method according to claim 2, wherein the data indicating a measure of optical viability of the first possible path is generated by modelling cumulative photonic effects that would occur if a connection were provisioned over the first possible path.

4. A method according to claim 3, wherein the cumulative photonic effects are modelled on the basis of the data representing the static state of at least part of the photonic network.

5. A method according to claim 3, wherein the cumulative photonic effects are modelled on the basis of the data representing the dynamic state of at least part of the photonic network.

6. A method according to claim 2, wherein the data indicating a measure of optical viability of the first possible path is generated by performing a rule-based function in respect of the possible path.

7. A method according to claim 2, wherein the step of selecting a plurality of optically viable photonic paths comprises the step of passing data identifying a second possible path in the photonic network to an optical viability checking function in dependence on the received data indicating a measure of optical viability of the first possible path.

8. A method according to claim 1, wherein the routing algorithm uses a combined metric for the at least one optically viable photonic path comprising a plurality of consecutive optical links, the combined metric being calculated in dependence on metrics associated with the plurality of consecutive optical links.

9. A method according to claim 8, wherein the combined metric is calculated in dependence on a metric associated with the one or more photonic switches linking the plurality of consecutive optical links.

10. A method according to claim 1, wherein only those optically viable photonic paths with terminating nodes which perform electronic switching are included in the plurality of optically viable photonic paths.

11. A method according to claim 1, wherein only those optically viable photonic paths with terminating nodes which are capable of being dynamically controlled to perform electronic switching are included in the plurality of optically viable photonic paths, and wherein the method comprises the step of:

provisioning a connection across the selected path from the first node to the second node;

controlling terminating nodes of one or more optically viable photonic paths of the selected path to perform electronic switching at least for an optical wavelength provisioned.

12. A method according to claim 2, wherein the data indicating a measure of optical viability is a Boolean result.

13. A method according to claim 2, wherein the data indicating a measure of optical viability is a confidence interval.

14. A computer program stored on a computer readable medium for performing the method of any claim 1.

15. Apparatus arranged to perform the method of claim 1.

16. A system for use in a photonic network, the system comprising:

a database arranged to store a plurality of optically viable photonic paths in the photonic network, at least one of the optically viable photonic paths comprising a plurality of consecutive optical links; and

a routing function using a routing algorithm to select a path in the photonic network, the routing algorithm using the plurality of optically viable photonic paths as at least part of the topological context when selecting the path.

17. A system according to claim 16, comprising

an optical viability checking function arranged to determine a measure of optical viability of a possible path in the photonic network; and

a path selection function arranged to selectively include the possible path in the database in dependence on the determined measure of optical viability of the possible path.

18. A system according to claim 17, wherein the optical viability checking function comprises a cumulative photonic effects modeller arranged to model cumulative photonic effects that would occur if a connection were provisioned over the possible path.

19. A system according to claim 18, wherein the cumulative photonic effects modeller is arranged to model cumulative photonic effects on the basis of the data representing a static state of at least part of the photonic network.

20. A system according to claim 18, wherein the cumulative photonic effects modeller is arranged to model cumulative photonic effects on

the basis of the data representing the dynamic state of at least part of the photonic network.

21. A system according to claim 17, wherein the optical viability checking function comprises a rule-based function operating on the possible path.

22. A photonic network comprising a system according to claim 16.